

Application No.: 10/657,481

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for displaying genotype information associated with probe array experiments, comprising the acts of:

receiving one or more sets of emission intensity data, wherein each set of emission intensity data includes a plurality of emission intensity values from a probe array experiment with an individual sample and each emission intensity value is associated with a probe disposed upon a probe array;

generating a plurality of genotype calls for each set of emission intensity data, wherein each of the genotype calls is ~~based, at least in part, upon~~ generated by applying one or more of the emission intensity values to one or more models enabled to specify nucleic acid composition;

assembling the plurality of genotype calls for each set of emission intensity data into one or more genotype data sets; and

displaying ~~each one or more of the genotype calls of each of the one or more~~ genotype data sets to a user in one or more panes of a graphical user interface comprising a first pane that displays a graphical representation of a first region of sequence associated with the genotype data sets, a second pane that displays a graphical representation of a second region of sequence selected from the first region of sequence, and a third pane that displays a graphical representation of a third region of sequence

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selected from the second region of sequence, wherein the graphical representation of the second region includes greater detail than the graphical representation of the first region, the graphical representation of the third region includes greater detail than the graphical representation of the second region and comprises a representation of sequence composition including the one or more genotype calls of each genotype data set.

2. (Original) The method of claim 1, wherein:

each of the plurality of emission intensity values corresponds to detected emissions from a scanned probe array.

3. (Original) The method of claim 1, wherein:

the probe includes a genotyping probe.

4. (Original) The method of claim 3, wherein:

the genotyping probe includes a sequencing probe.

5. (Original) The method of claim 3, wherein:

the genotyping probe includes a SNP probe.

6. (Currently Amended) The method of claim 1, wherein:

the genotype call is an A, G, C, T, or ~~(n)~~ no call.

7. (Original) The method of claim 1, wherein:

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the genotype call includes a SNP call.

8-12 (Cancelled)

13. (Original) The method of claim 1, further comprising the acts of:

retrieving annotation information in response to a user selection of one or more of the displayed genotype calls; and

displaying the annotation information in one or more panes of the graphical user interface.

14. (Currently Amended) A system for displaying genotype information associated with probe array experiments, comprising:

a sequence data manager ~~constructed and arranged to receive~~ that receives one or more sets of emission intensity data, wherein each set of emission intensity data includes a plurality of emission intensity values from a probe array experiment with an individual sample and each emission intensity value is associated with a probe disposed upon a probe array;

a genotype call generator ~~constructed and arranged to generate~~ that generates a plurality of genotype calls for each set of emission intensity data, wherein each of the genotype calls is ~~based, at least in part, upon~~ generated by applying one or more of the emission intensity values to one or more models enabled to specify nucleic acid composition;

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a data assembler ~~constructed and arranged to assemble~~ that assembles the plurality of genotype calls for each set of emission intensity data into one or more genotype data sets; and

an output manager ~~constructed and arranged to display~~ that displays each one or more of the genotype calls of each of the one or more genotype data sets to a user in one or more panes of a graphical user interface comprising a first pane that displays a graphical representation of a first region of sequence associated with the genotype data sets, a second pane that displays a graphical representation of a second region of sequence selected from the first region of sequence, and a third pane that displays a graphical representation of a third region of sequence selected from the second region of sequence, wherein the graphical representation of the second region includes greater detail than the graphical representation of the first region, the graphical representation of the third region includes greater detail than the graphical representation of the second region and comprises a representation of sequence composition including the one or more genotype calls of each genotype data set.

15. (Original) The system of claim 14, wherein:

each of the plurality of emission intensity values corresponds to detected emissions from a scanned probe array.

16. (Original) The system of claim 14, wherein:

the probe includes a genotyping probe.

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17. (Original) The system of claim 16, wherein:

the genotyping probe includes a sequencing probe.

18. (Original) The system of claim 16, wherein:

the genotyping probe includes a SNP probe.

19. (Currently Amended) The system of claim 14, wherein:

the genotype call is an A, G, C, T, or ~~(n)~~no call.

20. (Original) The system of claim 14, wherein:

the genotype call includes a SNP call.

21-25 (Cancelled)

26. (Original) The system of claim 14, wherein:

the output manager is further constructed and arranged to retrieve annotation information in response to a user selection of one or more of the displayed genotype calls, and display the annotation information in one or more panes of the graphical user interface.

27. (Currently Amended) A computer system for displaying genotype information associated with probe array experiments, comprising:

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a user computer having system memory with executable code stored thereon,
wherein the executable code performs a method, comprising is constructed and arranged
to perform the acts of;

receiving one or more sets of emission intensity data, wherein each set of
emission intensity data includes a plurality of emission intensity values from a probe
array experiment with an individual sample and each emission intensity value is
associated with a probe disposed upon a probe array;

generating a plurality of genotype calls for each set of emission intensity data,
wherein each of the genotype calls is based, at least in part, upon generated by applying
one or more of the emission intensity values to one or more models enabled to specify
nucleic acid composition;

assembling the plurality of genotype calls for each set of emission intensity data
into one or more genotype data sets; and

displaying each one or more of the genotype calls of each of the one or more
genotype data sets to a user in one or more panes of a graphical user interface comprising
a first pane that displays a graphical representation of a first region of sequence
associated with the genotype data sets, a second pane that displays a graphical
representation of a second region of sequence selected from the first region of sequence,
and a third pane that displays a graphical representation of a third region of sequence
selected from the second region of sequence, wherein the graphical representation of the
second region includes greater detail than the graphical representation of the first region,
the graphical representation of the third region includes greater detail than the graphical

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representation of the second region and comprises a representation of sequence composition including the one or more genotype calls of each genotype data set.

28. (New) The method of claim 1, wherein:

the models include a no call model, a homozygote model, and a heterozygote model.

29. (New) The method of claim 1, wherein:

the graphical representations of the second and third regions of sequence comprise an alignment of sequence information of two or more of the samples.

30. (New) The method of claim 1, wherein:

the graphical representation in the second pane includes a higher resolution than the first pane, and the third pane includes a higher resolution than the second pane.

31. (New) The method of claim 1, wherein:

the user selects the second region of sequence.

32. (New) The method of claim 1, wherein:

the user selects the third region of sequence.

33. (New) The system of claim 14, wherein:

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the models include a no call model, a homozygote model, and a heterozygote model.

34. (New) The system of claim 14, wherein:

the graphical representations of the second and third regions of sequence comprise an alignment of sequence information of two or more of the samples.

35. (New) The system of claim 14, wherein:

the graphical representation in the second pane includes a higher resolution than the first pane, and the third pane includes a higher resolution than the second pane.

36. (New) The method of claim 1, wherein:

the user selects the second region of sequence.

37. (New) The method of claim 1, wherein:

the user selects the third region of sequence.